

# PATENT ABSTRACTS OF JAPAN

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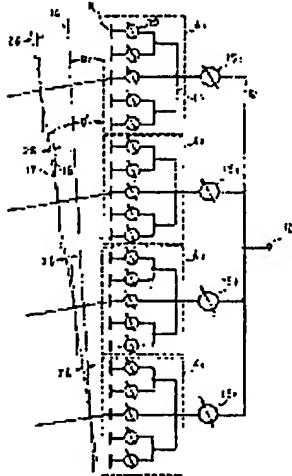
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## (54) TILT ANTENNA



### (57) Abstract:

PURPOSE: To apply the antenna to an antenna for mobile communication base station provided with a radiation characteristic over a wide angular range without deteriorating the low side lobe characteristic by grouping radiation elements of a tilt antenna and giving a phase change for each group.

CONSTITUTION: Radiation elements 41-44 for a conventional tilt antenna are grouped, the feeding amplitude and phase are adjusted for each group to realize the low side lobe characteristic of the tilt antenna. In this case, in order to satisfy the low side lobe characteristic, the relation among number M of radiation elements in one group, a beam tilt angle  $\theta T$ , radiation element interval (s) and a wavelength  $\lambda$  is selected so as to be  $\theta T \leq \sin^{-1}(\lambda/Ms)$  is satisfied thereby satisfying the low side lobe characteristic requested for the antenna for mobile communication base station. Thus,

number of cables to be replaced for the tilt antenna is decreased, the antenna feeding section is simplified and the simple handling is attained.

## LEGAL STATUS

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